JOURNAL OF ELECTROANALYTICAL CHEMISTRY AND INTERFACIAL ELECTROCHEMISTRY

Vol. 295 Nos. 1 and 2 26 November 1990

CONTENTS

Correction of boundary singularities in numerical simulation of time-dependent diffusion processes at unshielded disc electrodes
D.J. Gavaghan and J.S. Rollett (Oxford, Great Britain) 1

The general characteristics of microelectrodes of any planar geometry under steady-state conditions
X. Liu, J. Lu and C. Cha (Wuhan, P.R. China) 15

Quantitative analysis of the steady-state currents of reversible redox species at a microdisk array electrode embedded in a surface electrode
T. Horiuchi, O. Niwa, M. Morita and H. Tabei (Ibaraki, Japan) 25

Study of the bielectronic electro-oxidation of *N,N,N′,N′*-tetramethyl naphthidine (TMN) in non-aqueous medium. Determination of the individual kinetic parameters by a Laplace space analysis
M.A. Zón and H. Fernández (Córdoba, Argentina) 41

Kinetics of electrode reactions occurring on porous iron electrodes in alkaline media
K. Vijayamohanan, A.K. Shukla and S. Sathyanarayana (Bangalore, India) 59

Photoelectrochemical properties of Fe_2O_3 microcrystallites prepared in Nafion
H. Miyoshi, K. Tanaka, H. Uchida, H. Yoneyama, H. Mori and T. Sakata (Osaka, Japan) 71

Structural effects in electrocatalysis: oxidation of glucose on single-crystal platinum electrodes
K. Popović, A. Tripković, N. Marković and R.R. Adžić (Belgrade, Yugoslavia) 79

Electrochemical oxidation of ferrocene in naturally occurring molecular assemblies at microdisc electrodes. An application to dairy products
S. Daniele, M.A. Baldo, P. Ugo and G.A. Mazzocchin (Venice, Italy) 95

The use of the methyl viologen neutral species as a mediator
K.L. McLachlan and A.L. Crumbliss (Durham, NC, U.S.A.) 113

Reversible redox chemistry, hydrodesulfurization, and anodic oxidation of thiophenols chemisorbed at smooth polycrystalline iridium electrodes
M.E. Bothwell and M.P. Soriaga (College Station, TX, U.S.A.) 123

Charge transfer reactions of oligo-decker sandwich compounds
L. Michels and W. Schmickler (Bonn, F.R.G.) 139

The mechanism of oxygen reduction on zinc
H.S. Wroblowa and S.B. Qaderi (Dearborn, MI, U.S.A.) 153

A study of the effect of aqueous components upon ion transfer across the polymer–water interface
R.D. Armstrong and W.G. Proud (Newcastle upon Tyne, Great Britain) 163

SERS effect of pyridine-*n*-aldehyde thiosemicarbazone on a silver electrode
L.S. Pinheiro and M.L.A. Temperini (São Paulo, Brazil) 169

Voltammetric study on the oscillation of the potential difference at a liquid/liquid or liquid/membrane interface accompanied by ion transfer
K. Maeda, S. Kihara, M. Suzuki and M. Matsui (Kyoto, Japan) 183

Spectroelectrochemical study of passive films formed on brass electrodes in 0.5 M H_2SO_4 aqueous solutions containing benzotriazole (BTAH)
S.F.L.A. da Costa, S.M.L. Agostinho and J.C. Rubim (São Paulo, Brazil) 203

Bulk effects in external reflection IR spectroscopy. The interpretation of adsorption data for ionic species
T. Iwasita and F.C. Nart (Bonn, F.R.G.) 215

Trends in the adsorption behaviour of n-aliphatic alcohols on mercury from aqueous 0.5 M Na_2SO_4
M.R. Moncelli, M.L. Foresti and R. Guidelli (Florence, Italy) 225

Trends in the electrosorption of terminal glycols at the mercury/water interface
M.R. Moncelli and R. Guidelli (Florence, Italy) 239

(continued on p. 3 of cover)

Contents (*continued*)

Chronocoulometric measurements of capacitive charge in the presence of faradaic contributions
M.L. Foresti, G. Pezzatini (Florence, Italy) and J.C.G. Monteagudo (Santiago de Compostela, Spain) 251

$NaClO_4$ electrosorption on liquid gallium from water
G. Pezzatini, M.L. Foresti, M. Innocenti and R. Guidelli (Florence, Italy) 265

Comparative adsorption study of 1-butanol and 1-pentanol on mercury and gallium from aqueous 0.5 M Na_2SO_4 at 32°C
G. Pezzatini, M.R. Moncelli, M. Innocenti and R. Guidelli (Florence, Italy) 275

Cyclic voltammetric characterization of oriented monocrystalline gold surfaces in aqueous alkaline solution
A. Hamelin (Meudon, France), M.J. Sottomayor, F. Silva (Porto, Portugal), S.-C. Chang and M.J. Weaver (West Lafayette, IN, U.S.A.) 291

The temperature dependence of double layer properties of gold faces in perchloric acid. Part III. The gold(100) face
F. Silva, M.J. Sottomayor (Porto, Portugal), A. Hamelin and L. Stoicoviciu (Meudon, France) . 301

Adsorption of hydrogen on platinum single crystal electrodes in acid and alkali solutions
H. Kita, S. Ye, A. Aramata (Sapporo, Japan) and N. Furuya (Kofu, Japan) 317

Electrochemical monitoring of the thermal reordering of platinum single-crystal surfaces after metallographic polishing from the early stage to the equilibrium surfaces
J. Clavilier, K. El Achi, M. Petit, A. Rodes and M.A. Zamakhchari (Meudon, France) 333

An electroreflectance study of polyaniline films in aqueous and aprotic media
C. Nguyen van Huong and M.J. Gonzalez-Tejera (Meudon, France) 357

Electrochemically assessed corrosion reactivity of $YBa_2Cu_3O_7$ electrodes
D.R. Riley and J.T. McDevitt (Austin, TX, U.S.A.) 373

Voltammetric studies of *cis*-dioxobis(dithiocarbamato)molybdenum(VI) complexes
K. Unoura, A. Iwase (Yamagata, Japan) and H. Ogino (Sendai, Japan) 385

A comparison of calorimetric methods applied to the electrolysis of heavy water on palladium cathodes
F.T. Wagner, T.E. Moylan (Warren, MI, U.S.A.), M.E. Hayden, U. Narger and J.L. Booth (Vancouver, Canada) 393

Short communication

In situ photogeneration of a catalyst on a chemically modified electrode surface: application to a mixed-valent hexacyanoferrate system
S. Basak, K. Rajeshwar (Arlington, TX, U.S.A.) and M. Kaneko (Saitama, Japan) 403

Preliminary notes

Theoretical neutron flux levels, dose rates, and metal foil activation in electrochemical cold fusion experiments
M.H. Miles (China Lake, CA, U.S.A.) and R.E. Miles (Golden, CO, U.S.A.) 409

Electroreduction of carbon dioxide on platinum single crystal electrodes: electrochemical and in situ FTIR studies
B.Z. Nikolic, H. Huang, D. Gervasio, A. Lin, C. Fierro, R.R. Adzic and E.B. Yeager (Cleveland, OH, U.S.A.) 415

Announcements 425

Author index 426

Subject index 427

JOURNAL OF ELECTROANALYTICAL CHEMISTRY AND INTERFACIAL ELECTROCHEMISTRY and BIOELECTROCHEMISTRY AND BIOENERGETICS

Publication schedule for 1990 (please note that Vol. 297, belonging to the 1990 subscription, will appear in 1991)

Month	J	F	M	A	M	J	J	A	S	O	N	D
J. Electroanal. Chem.	277/ 1+2 278/ 1+2	279/ 1+2 280/1	280/2 281/ 1+2	282/ 1+2 283/ 1+2	284/1 284/2	285/ 1+2 286/ 1+2	287/1 287/2	288/ 1+2 289/ 1+2	290/ 1+2 291/ 1+2	292/ 1+2 293/ 1+2	294/ 1+2 295/ 1+2	296/1 296/2
Bioelectrochem. Bioenerg.		298/1 (23/1)		298/2 (23/2)		298/3 (23/3)		299/1 (24/1)		299/2 (24/2)		299/3 (24/3)